

MWPS-30' Truss

30' span, 2-web trusses

CAUTION!

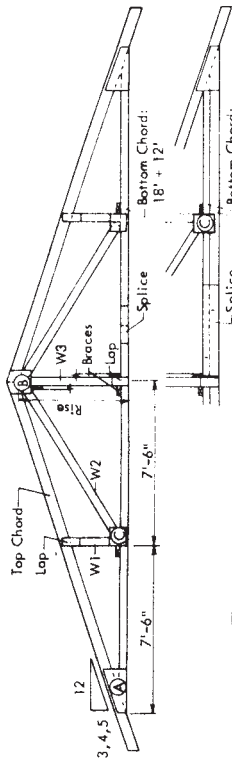
Additional professional services will be required to tailor this plan to your situation, including but not limited to: assurance of compliance with codes and regulations; review of specifications for materials and equipment; supervision of site selection, bid letting and construction; and provision for utilities, waste management, roads or other access. **Furthermore, any deviation from the given specifications may result in structural failure, property damage, and personal injury including loss of life.**

WARRANTY DISCLAIMER

This plan provides conceptual information only. **Neither midwest plan service nor any of the cooperating land-grant universities, or their respective agents or employees, have made, and do not hereby make, any representation, warranty or covenant with respect to the specifications in this plan.** Additional professional services will be required to tailor this plan to your situation, including but not limited to: assurance of compliance with codes and regulations; review of specifications for materials and equipment; supervision of site selection, bid letting and construction; and provision for utilities, waste management, roads or other access.

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| MIDWEST PLAN SERVICE |
| Cooperative Extension Work in Agriculture and Home Economics and Agricultural Experiment Stations of North Central Region - USDA Cooperating |
| 30' Span, 2-web trusses |
| Title Page |
| MIDWEST PLAN NO. 30' Truss |

30' span, 2-web trusses with plywood gussets



Gussets B and C are 3/8" thick plywood.

Table of lengths

| Roof Slope | Top Chord Rise | Top Chord | W1 | W2 | W3 |
|------------|----------------|-----------|----|-----|----|
| 3/12 | 3'-9" | 16' | 2' | 8' | 4' |
| 4/12 | 5'-0" | 17' | 3' | 9' | 5' |
| 5/12 | 6'-3" | 17' | 3' | 10' | 6' |

This sheet is to help you SELECT and ERECT trusses. DO NOT try to BUILD trusses from it, because it does not include enough information on gitting, joints, splices, and fabrication. See "Designs for Glued Trusses," MWPS-9. If you buy metal-plate trusses, use their designer's data.

4+4, 4+6, 6+6 indicates stacked lower chord.
4&4, 6&4, indicate double web; a 2x4 is attached to the web member to increase its stiffness.

To select a truss:

1. estimate roof dead load
2. determine appropriate snow load
3. roof dead load plus snow load = roof design load, psf
4. select a truss to carry at least the total roof load for the lumber quality, slope, spacing, and ceiling dead load you will use.

For more information see back page and MWPS-9, Designs for Glued Trusses, 4th Edition, 1981.

1400F Lumber

| Top Chord | Bottom Chord | Truss spacing, ft | | | | | Web member sizes | | | Gusset Sizes, in. | | |
|-----------|--------------|-------------------|------|------|----|----|------------------|-----|-----|-------------------|-------|-------|
| | | 0 | 5 | 8 | 5 | 8 | W1 | W2 | W3 | A | T | H |
| 2x4 | 2x4 | 25 | 24 | 12 | 0 | 0 | 2x4 | 2x4 | 2x4 | 3/8x3x18 | 8x12 | 8x8 |
| 2x6 | 2x4 | 55 | 34 | 24 | 0 | 0 | " | " | " | 3/8x4x16 | 10x16 | 8x10 |
| 2x6 | 2x6 | 53 | 49 | 47 | 23 | 17 | " | " | " | 3/8x4x30 | " | " |
| 2x8 | 2x6 | 76 | 68 | 65 | 33 | 28 | 2x4 | 2x4 | 2x4 | 3/8x4x22 | 12x16 | 8x12 |
| 2x10 | 4x4 | 100+ | 100+ | 100+ | 47 | 43 | " | " | " | 3/8x4x30 | 14x16 | 12x10 |
| 2x12 | 4x6 | " | " | " | 61 | 55 | " | " | " | 3/8x4x36 | 16x20 | 14x10 |
| 2x12 | 6x6 | " | " | " | 58 | 53 | " | " | " | 3/8x4x58 | " | 16x12 |
| 2x4 | 2x4 | 31 | 29 | 28 | 13 | 0 | 2x4 | 2x4 | 2x4 | 3/8x3x16 | 8x12 | 8x8 |
| 2x6 | 2x4 | 63 | 59 | 49 | 27 | 0 | " | " | " | 3/8x4x15 | 10x12 | 8x10 |
| 2x6 | 2x6 | 61 | 58 | 56 | 26 | 24 | " | " | " | 3/8x4x27 | 12x12 | 10x10 |
| 2x8 | 2x6 | 91 | 85 | 82 | 40 | 36 | 2x4 | 4&4 | 2x4 | 3/8x4x20 | 12x16 | 10x10 |
| 2x10 | 4x4 | 100+ | 100+ | 100+ | 56 | 50 | " | " | " | 3/8x4x27 | 16x16 | 12x12 |
| 2x12 | 4x6 | " | " | " | 70 | 64 | " | " | " | 3/8x4x30 | 16x20 | 14x12 |
| 2x12 | 6x6 | " | " | " | 67 | 62 | " | " | " | 3/8x4x34 | 16x20 | 14x12 |
| 2x4 | 2x4 | 35 | 32 | 31 | 14 | 0 | 2x4 | 2x4 | 2x4 | 3/8x3x14 | 8x12 | 8x8 |
| 2x6 | 2x4 | 69 | 66 | 66 | 33 | 30 | " | " | " | 3/8x4x13 | 10x12 | 8x10 |
| 2x6 | 2x6 | 67 | 64 | 62 | 29 | 27 | " | " | " | 3/8x4x24 | 10x16 | 8x10 |
| 2x8 | 2x6 | 100+ | 95 | 92 | 44 | 41 | 2x4 | 4&4 | 2x4 | 3/8x4x18 | 12x16 | 8x10 |
| 2x10 | 4x4 | 100+ | 100+ | 100+ | 61 | 56 | " | " | " | 3/8x4x25 | 16x16 | 10x12 |
| 2x12 | 4x6 | " | " | " | 77 | 71 | " | " | " | 3/8x4x27 | 16x20 | 12x12 |
| 2x12 | 6x6 | " | " | " | 75 | 69 | " | " | " | 3/8x4x28 | " | 16x12 |

1100F Lumber

| Top Chord | Bottom Chord | Truss spacing, ft | | | | | Web member sizes | | | Gusset Sizes, in. | | |
|-----------|--------------|-------------------|------|------|----|----|------------------|-----|-----|-------------------|-------|-------|
| | | 0 | 5 | 8 | 5 | 8 | W1 | W2 | W3 | A | T | H |
| 2x4 | 2x4 | 22 | 20 | 0 | 0 | 0 | 2x4 | 2x4 | 2x4 | 3/8x3x14 | 8x17 | 8x8 |
| 2x6 | 2x4 | 44 | 37 | 0 | 0 | 0 | " | " | " | 3/8x4x23 | 10x12 | " |
| 2x6 | 2x6 | 43 | 40 | 37 | 18 | 15 | " | " | " | 3/8x4x25 | 10x16 | 8x10 |
| 2x8 | 2x6 | 58 | 52 | 49 | 25 | 20 | 2x4 | 2x4 | 2x4 | 3/8x4x31 | 12x16 | 8x10 |
| 2x10 | 4x4 | 88 | 81 | 78 | 38 | 28 | " | " | " | 3/8x4x28 | 14x16 | 10x10 |
| 2x12 | 4+6 | 100+ | 100+ | 100+ | 50 | 43 | " | " | " | 3/8x4x36 | 16x16 | 12x12 |
| 2x12 | 6+6 | " | " | " | 47 | 43 | " | " | " | 3/8x4x48 | " | 14x12 |
| 2x4 | 2x4 | 25 | 23 | 17 | 0 | 0 | 2x4 | 2x4 | 2x4 | 3/8x3x13 | 8x12 | 8x8 |
| 2x6 | 2x4 | 51 | 48 | 17 | 22 | 0 | " | " | " | 3/8x4x21 | 10x12 | 8x10 |
| 2x6 | 2x6 | 49 | 47 | 45 | 21 | 19 | " | " | " | 3/8x4x22 | " | " |
| 2x8 | 2x6 | 74 | 69 | 67 | 32 | 29 | 2x4 | 2x4 | 2x4 | 3/8x4x29 | 14x12 | 10x10 |
| 2x10 | 4x4 | 100+ | 94 | 94 | 44 | 38 | " | " | " | 3/8x4x27 | 14x16 | 12x10 |
| 2x12 | 4+6 | 100+ | 100+ | 100+ | 57 | 52 | " | " | " | 3/8x4x28 | 16x16 | 14x12 |
| 2x12 | 6+6 | " | " | " | 55 | 50 | " | " | " | 3/8x4x44 | " | 16x12 |
| 2x4 | 2x4 | 27 | 25 | 24 | 0 | 0 | 2x4 | 2x4 | 2x4 | 3/8x3x11 | 8x12 | 8x8 |
| 2x6 | 2x4 | 53 | 53 | 24 | 0 | 0 | " | " | " | 3/8x4x19 | 10x12 | " |
| 2x6 | 2x6 | 54 | 52 | 50 | 23 | 21 | " | " | " | 3/8x4x20 | " | " |
| 2x8 | 2x6 | 82 | 77 | 74 | 35 | 32 | 2x4 | 4&4 | 2x4 | 3/8x4x26 | 12x16 | 8x10 |
| 2x10 | 4+4 | 100+ | 100+ | 100+ | 49 | 46 | " | " | " | 3/8x4x20 | 14x16 | 10x10 |
| 2x12 | 4+6 | " | " | " | 63 | 58 | " | " | " | 3/8x4x22 | 16x16 | 12x12 |
| 2x12 | 6+6 | " | " | " | 61 | 56 | " | " | " | 3/8x4x40 | " | 16x12 |

1600F Lumber

| Top Chord | Bottom Chord | Truss spacing, ft | | | | | Web member sizes | | | Gusset Sizes, in. | | |
|-----------|--------------|-------------------|------|------|----|----|------------------|-----|-----|-------------------|-------|-------|
| | | 0 | 5 | 8 | 5 | 8 | W1 | W2 | W3 | A | T | H |
| 2x4 | 2x4 | 33 | 31 | 29 | 14 | 0 | 2x4 | 2x4 | 2x4 | 3/8x3x21 | 8x12 | 8x8 |
| 2x6 | 2x4 | 66 | 62 | 51 | 28 | 0 | " | " | " | 3/8x4x19 | 10x16 | 8x10 |
| 2x6 | 2x6 | 63 | 59 | 57 | 27 | 24 | " | " | " | 3/8x4x36 | " | 8x12 |
| 2x8 | 2x6 | 90 | 82 | 82 | 39 | 34 | 2x4 | 2x4 | 2x4 | 3/8x4x27 | 12x20 | 10x10 |
| 2x10 | 4+4 | 101+ | 101+ | 101+ | 57 | 51 | " | " | " | 3/8x4x36 | 14x20 | 12x12 |
| 2x12 | 4+6 | " | " | " | 74 | 67 | " | " | " | 3/8x4x40 | 16x20 | 14x12 |
| 2x12 | 6+6 | " | " | " | 70 | 64 | " | " | " | 3/8x4x44 | 18x24 | 16x14 |
| 2x4 | 2x4 | 37 | 35 | 34 | 16 | 14 | 2x4 | 2x4 | 2x4 | 3/8x3x18 | 8x12 | 8x10 |
| 2x6 | 2x4 | 75 | 71 | 66 | 32 | 14 | " | " | " | 3/8x4x17 | 10x16 | 10x10 |
| 2x6 | 2x6 | 73 | 69 | 67 | 32 | 29 | " | " | " | 3/8x4x18 | " | " |
| 2x8 | 2x6 | 101+ | 101+ | 99 | 47 | 43 | 2x4 | 2x4 | 2x4 | 3/8x4x24 | 14x16 | 10x12 |
| 2x10 | 4+4 | 100+ | 100+ | 100+ | 66 | 61 | " | " | " | 3/8x4x28 | 16x20 | 12x12 |
| 2x12 | 4+6 | " | " | " | 84 | 77 | " | " | " | 3/8x4x30 | 18x20 | 16x14 |
| 2x12 | 6+6 | " | " | " | 81 | 74 | " | " | " | 3/8x4x36 | " | 18x14 |
| 2x4 | 2x4 | 39 | 38 | 38 | 17 | 15 | 2x4 | 2x4 | 2x4 | 3/8x3x16 | 8x12 | 8x8 |
| 2x6 | 2x4 | 87 | 78 | 78 | 35 | 25 | " | " | " | 3/8x4x16 | 10x16 | 8x10 |
| 2x6 | 2x6 | 80 | 76 | 74 | 35 | 32 | " | " | " | 3/8x4x13 | " | " |
| 2x8 | 2x6 | 101+ | 101+ | 101+ | 52 | 49 | 2x4 | 2x4 | 2x4 | 3/8x4x21 | 14x16 | 10x10 |
| 2x10 | 4+4 | 100+ | 100+ | 100+ | 73 | 68 | " | " | " | 3/8x4x25 | 14x20 | 10x12 |
| 2x12 | 4+6 | " | " | " | 93 | 86 | " | " | " | 3/8x4x33 | 18x20 | 14x12 |
| 2x12 | 6+6 | " | " | " | 90 | 83 | " | " | " | 3/8x4x33 | " | 18x12 |

